

STS-112 Run 1

*2988159 *

4-16-02

PROCESSING OPERATIONS CONTROL OMI PLANNING SHEET



Wad Number V6028.001-A04-R01	SITE SLF	Elem CD V	End Item 104 FLT: 026	DATE: 09/13/2002 TIME: 12:12:25
Title: POST FLT ORB REUSABLE SURFACE INSULATION RUNWAY ENGINEERING WALKDOWN				Sub Element/Zone 30
Project Work Order No.	Hazard: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	SFOC Safety N/A	<input checked="" type="checkbox"/> Local Copy <input type="checkbox"/> Firing Room Copy	
Authorizing Document VPL426	Material & Equipment: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	MICR Req'd <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	OMRS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

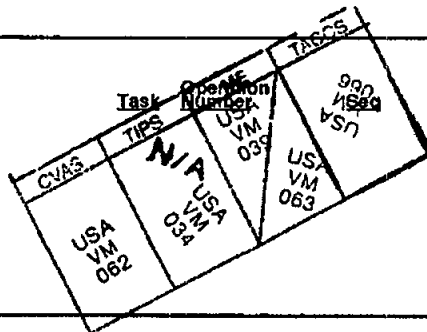
PERFORM THE FOLLOWING:

Pre-Ops Setups

Task	Operation Number	Seq	Steps	Task	Operation Number	Seq	Steps
------	------------------	-----	-------	------	------------------	-----	-------

OPS Support

Task	Operation Number	Seq	Steps
------	------------------	-----	-------



Operating Instructions

Task	Seq	Steps	Task	Seq	Steps
	010				
	020				

Post Ops

Task	Operation Number	Seq	Steps
------	------------------	-----	-------

Appendices

Task	Seq
N/A	

Subtask WAD's

N/A

Planner AARON MCCLLOUD	WC 158 USA SEP 14 102	Ext 6523	QC Closure	Date 10-21-02	Page 1 OF 1
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OMI TASK CLOSEOUT CHECKLIST

SPC 397

OMI No. <i>V6028.001 Rev. A-04</i>	Run No. <i>1</i>	Task Control No. (TCN) <i>2988159</i>
Start Date <i>10-18-02</i>	Completion Date <i>10-18-02</i>	Closure Date <i>OCT 21 02</i>
1. Deviation Index: Verify total number of deviations agree with index. Verify entry is correct into OMI.		QC/Eng. <i>N/A</i> Date <i>N/A</i>
2. Constraints: Verify all constraints are cleared.		<i>N/A</i> <i>N/A</i>
3. IPR's: Verify that all IPR's are closed or upgraded to problem reports or dispositioned as no constraint to OMI closure and incorporated in central IPR system and a copy of the central IPR sort attached.		<i>SPC 646</i> <i>OCT 21 02</i>
4. Verify that material and equipment requirement list enclosed (if applicable).		<i>N/A</i>
5. OMI: Verify that all pages or verification sheets are completed, stamped, and dated in the lower left/right hand corners.		<i>SPC 397</i> <i>OCT 21 02</i>
6. OMI: Verify that all miscellaneous documents/procedures have sequence number referenced and stamped; e.g., photos, sample results, etc.		<i>SPC 397</i> <i>OCT 21 02</i>
7. Planned task/OMI satisfactorily completed. OPR: <i>[Signature]</i> <i>10/18/02</i> <i>SEGL TPS 9E</i>		<i>SPC 397</i> <i>N/A</i> <i>OCT 21 02</i>

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SPEARS: 0000004

POST FLT ORB REUSABLE SURFACE INSULATION RUNWAY ENGINEERING WALKDOWN

Element/End Item: 102, 103, 104, 105

Flow/Usage: NA

Facility: AAFB, BANJUL, BENGUE, DFRF, ELS, HAFB, MORON, SLF, WSSH,
ZARAG

Design Center Concurrence: NA

Category: F

OPR: TPS

TTL ORG: SE

**This document does not contain
hazardous operations.**

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SPARS: 0000005

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1.0 INFORMATION

1.1 Objective

To perform post-landing survey/inspection of Orbiter Thermal Protection Subsystem (TPS) to determine if components exhibit obvious damage that would require reservicing, repair, redesign or replacement.

1.2 Special Instructions All Operations

1. Suspect nonconformance's shall be augmented by various other nondestructive methods (shims, etc.).
2. Unless otherwise specified, inspection(s) shall be accomplished visually.
3. Handling or movement of components shall be held to a minimum.
4. Inspection steps may be performed out of sequence and/or concurrently in different areas.
5. Special precautions in handling RSI:
 - RSI ceramic tiles are very fragile and easily damaged. The highly porous, low density ceramic fiber mat core is exceptionally low in tensile and compression strengths. Glaze on five faces of the tile is a thin brittle glass over a core offering very low resistance to crushing stresses. Slight finger pressure can often fracture the glaze making repair or replacement necessary. Exterior glass fabric or flexible insulation blankets, gap fillers and thermal barriers are easily snagged, abraded and damaged. RSI replacement and repair is difficult, expensive and time consuming.
 - Tile glaze is designed to seal outer surface of tile and provide critical optical properties. Properties may be partially lost or destroyed by fingerprints or contamination on the glazed surface. Contamination on nonglazed faying surface may significantly affect attachment-bonding characteristics.

6. Mandatory precautions in handling RSI:
 - Wear clean white low-lint gloves when handling tile or tile subassemblies and subassembly components (strain isolator pads and filler bars), flexible insulation blankets and blanket components, thermal barriers and/or gap fillers.
 - Handle delicate tiles and tile subassemblies with extreme care to avoid fracturing the thin brittle glass surface glaze by squeezing, bumping or dropping.
 - Use extra caution to avoid bumping RSI when positioning work stands in RSI work or storage areas.
 - Comply with tethering/taping instructions.
7. During inspection, adequate lighting shall be obtained if not available in inspection area.

1.3 Operations List

Operation		Shop/ Cntl Rm Console	OPR	Haz (Y/N)	Duration (Hrs)
No.	Title				
10	TASK TEAM READINESS	TPS/ NONE	TPS	N	0.3
20	TPS ENG LANDING QUICK LOOK	TPS/ NONE	TPS	N	2.0

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2.0 SAFETY INFORMATION

2.4 Reference Safety Documentation

Number	Rev	Title
KHB 1710.2	LI	KSC Safety Practices Handbook
GSOP 5400	LI	Ground Safety Operating Procedure

3.0 STAGING REQUIREMENTS

4.0 PLANNING REQUIREMENTS

OIR Required Yes [], No [X]

4.4 Support Services, Commodities, and Equipment

4.4.9 Vehicles, Ground Support Equipment, and Special Equipment

- (1) A72-0812, Access Stand, 11 to 29 ft
- (2) Hi-Ranger, 50 ft

4.4.13 Other Support (KSC)

- Nondedicated support shall be requested via STS/Payload KSC Integrated Control Schedule.

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5.0 CONFIGURATION ACCOUNTING AND VERIFICATION

5.1 Specific OMRS Requirements Satisfied by this TOP

OMRS NO.	NOMENCLATURE/ EFFECTIVITY	SEQ-STEP (CAP)
-----	-----	-----
V09AJ0.097	POST LANDING RUNWAY QUICK LOOK INSP	20-001
L03	V02F14-90	
	V03F16-90	
	V04F14-90	
	V05F4-90	

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SPEARS: 00000008

OPERATION 10 TASK TEAM READINESS

Shop: TPS
Cntrl Rm Console: NONE
OPR: TPS
Zone: 100
Hazard (Y/N): N
Duration (Hrs): 0.3

Call To Stations

10-1 Verify constraints status.

TTL: *J. N. Huff*
10-1802

10-2 Verify following personnel on station and ready to proceed with inspection.

TTL: *J. N. Huff*
10-1802

Table 10-1 Required Personnel	
NASA KSC TPS Eng	1
SFOC TPS Eng	1
LSS TPS Eng	1

*** End of Call To Stations ***

*** End of Operation 10 ***

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SPEARS: 00000009

OPERATION 20 TPS ENG LANDING QUICK LOOK

Shop: TPS
Cntrl Rm Console: NONE
OPR: TPS
Zone: 100
Hazard (Y/N): N
Duration (Hrs): 2.0

TPS Engineering Team Post-Landing Runway Quicklook Inspection

NOTE

Post-landing runway quicklook inspection is to be performed after scheduled landing immediately following vehicle hazard and safety inspection. For unscheduled landing, perform as soon as practical.

Engineering shall assess overall vehicle TPS post-flight condition while placing special emphasis on potential impacts to TPS turnaround processing.

Team shall consist of NASA KSC, SFOC and LSS TPS Engineering.

Grossly anomalous conditions must be identified for PR initiation and addressed as soon as practical to support ferry flight and other post-flight turnaround activities.

- 20-1 TPS Engineering Team perform post-landing Orbiter walkdown visual inspection for gross TPS damage/anomalies. Sign upon completion of inspection.

OMRSD V09AJ0.097

OK
10/18/02

NASA KSC SE	<u>Joy Noel Huff</u>	Date	<u>10-18-02</u>
SFOC SE	<u>Chris R. Rocco</u>	Date	<u>10/18/02</u>
LSS TPS	<u>Vania Dominguez</u> DOMINGUEZ	Date	<u>10/18/02</u>

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- 20-2 Engineering and debris team take samples as deemed necessary. Document all samples in Table 20-1 (Sample Log). Before any samples are taken, obtain the following concurrence:

SFOC TPS Eng N/R Date _____

NASA TPS Eng N/A Date _____

LSS TPS Eng N/A Date _____

(Not Performed:)

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SPEARS: 0010010

Table 20-1 Sample Log				
Item	Part Number	Location	Remarks TPS Eng Team Signature	N/P
1				NP
2				NP
3				NP
4			<i>[Signature]</i>	NP
5			<i>Romco 10/18/02</i>	NP
6			<i>N/A</i>	NP
7				NP
8				NP
9				NP
10				NP

*** End of TPS Engineering Team Post-Landing Runway Quicklook Inspection ***

NOTE

Do not perform 20-3 if no debris samples were taken in the previous step.

20-3 Route samples with P/N, vehicle location and other pertinent data to NASA Debris Team Leader for analysis.

SFOC TPS Eng N/A Date

Not Performed: *[Signature]*

[Signature]
[Signature]
10-18-02

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*** End of Operation 20 ***

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*****
* PROGRAM PRA120 SELECTION CRITERIA
* -----
*
* RPT TYPE: IPR
*
* PR GROUP:
*
* WORK AREA CD:
*
* PR ELEM CD:
*
* STS NO:
*
* Starting RPT DT: 09/13/02
*
* Ending RPT DT: 10/21/02
*
* LRU or Non-LRU: B
*
* PRACA EFF CO:
*
* EICN:
*
* RPT STATUS: B
*
* DETECTED DURING: V6028.001-A04-R01
*
* -----
* Sorted by DETECTED DURING, PR ELEM CD, and EICN
*
*****

```

SPEARS: 0000011

DATE: 10/21/02 14:36
REPORT CODE: PRA1200A

PROBLEM REPORTING AND CORRECTIVE ACTION SYSTEM
PROBLEMS BY [REDACTED] DURING

PAGE: 1

*
* NO DATA FOUND ON THE DATABASE FOR THE SELECTED PARAMETERS *
*

*
* END OF REPORT *
*

SPEARS: 0000012